General Specifications

Item	Specification
Ignition timing	10 degrees BTDC ± 2 degrees non-adjustable
Firing order	1-3-7-2-6-5-4-8
Spark plug gap mm (in)	1.32-1.42 (0.052-0.056)
Spark plug type	AWSF-32EM

Torque Specifications

Description	Nm	lb-ft	lb-in
Spark plugs	15	11	—
Ignition coil cover bolts	10	—	89

Engine Ignition

Eight separate ignition coils:

- are controlled by the powertrain control module (PCM).
- are mounted directly above each spark plug.
- are controlled by the powertrain control module for correct firing sequence.

The spark plug:

- changes the high voltage pulse into a spark which ignites the fuel and air mixture.
- originally equipped on the vehicle has a platinum-enhanced active electrode for long life.

The crankshaft position (CKP) sensor:

NOTE: Initial engine ignition timing is set at 10 degrees ± 2 degrees before top dead center (BTDC) and is not adjustable. For additional information, refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.

- is a variable reluctance sensor, triggered by a 36-minus-1 tooth trigger pulse wheel located on the crankshaft, inside the engine front cover.

The sine wave type signal generated from the crankshaft position sensor provides two types of information:

- position of the crankshaft in 10 degree increments
- the crankshaft speed (rpm)

For additional information, refer to Section 303-14 .

Engine Ignition

Refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.

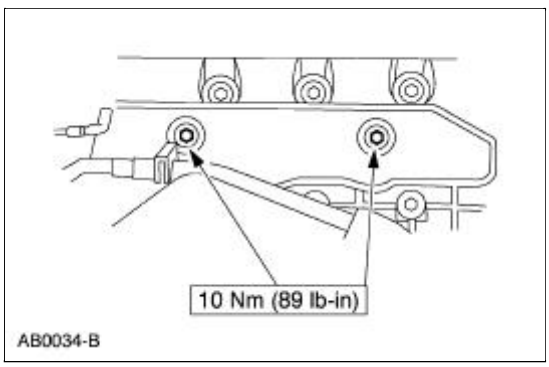
Ignition Coil-On-Plug

Material

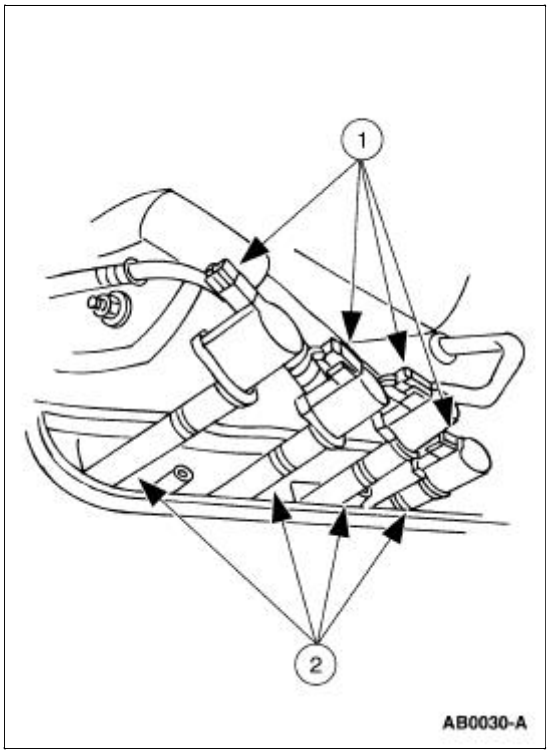
Item	Specification
Silicone Brake Caliper Grease and Dielectric Compound D7AZ-19A331-A or equivalent	ESE-M1C171-A

Removal and Installation

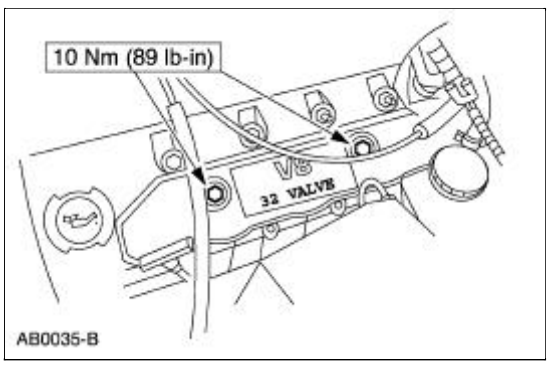
1. Disconnect the battery ground cable. For additional information, refer to Section 414-01 .
2. Remove the air cleaner outlet pipe. For additional information, refer to Section 303-12 .
3. Remove the RH ignition coil cover bolts and the cover.



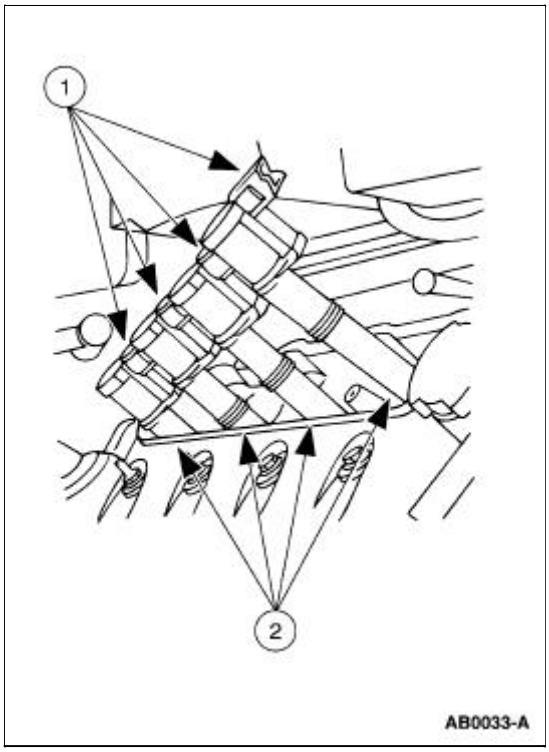
4. Remove the ignition coils.
    1. Disconnect the electrical connectors.
    2. Remove the ignition coils.



5. Remove the LH ignition coil cover bolts and the cover.



6. Remove the ignition coils.
    1. Disconnect the connectors.
    2. Remove the ignition coils.



7. **NOTE:** Verify that the ignition coil spring is correctly located inside the ignition coil boot and that there is no damage to the tip of the boot.

   To install, reverse the removal procedure.

   - Apply a light coat of dielectric grease to the inside of the ignition coil boots.

Spark Plugs

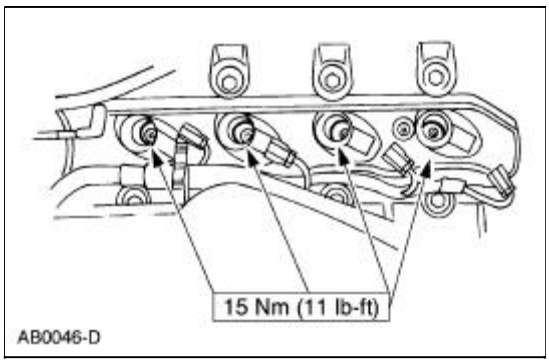
Removal and Installation

1. Remove the ignition coil-on-plug. For additional information, refer to Ignition Coil-On-Plug in this section.

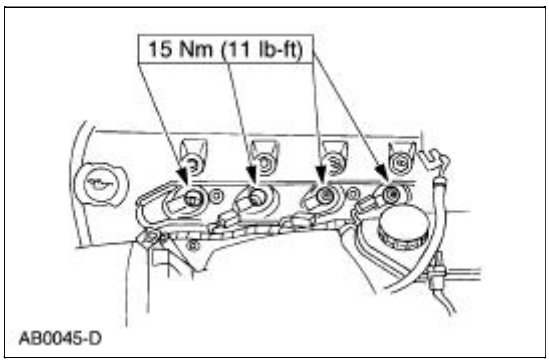
2. **NOTE:** Use compressed air to remove any foreign material from the spark plug well before removing the spark plugs.

   NOTE: If an original spark plug is used, make sure it is installed in the same cylinder from which it was taken. New spark plugs can be used in any cylinder.

   Remove the RH spark plugs.

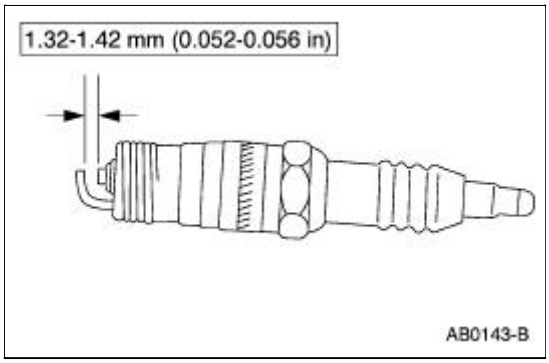


3. Remove the LH spark plugs.



4. Inspect the spark plugs. Install new spark plugs as necessary. For additional information, refer to Section 303-00

5. Adjust the spark plug gap as necessary.



6. To install, reverse the removal procedure.